

### COMPREHENSIVE VALIDATION PACKAGE

# ATL Applications INVENTORY SHEET

# WORK ORDER # 0908456C

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Completed by		
Completed by:  Kara McKiernan/ Documen	t Control	00/15/04
	Control	09/17/09
(Signature) (Print Name & Tit	le)	(Date)



#### **WORK ORDER #:** 0908456C

### Work Order Summary

CLIENT:

Mr. Taeko Minegishi

BILL TO:

Accounts Payable

Environmental Health & Engineering,

Environmental Health & Engineering, Inc.

117 Fourth Avenue

117 Fourth Avenue

Needham, MA 02494

Needham, MA 02494

PHONE:

55A

800-825-5343

P.O. #

16512

FAX:

781-247-4305

PROJECT#

**ATL Applications** 

16512

DATE RECEIVED: DATE COMPLETED: 08/21/2009 09/16/2009

100233

CONTACT: Ausha Scott

FRACTION#	NAME	TEST
41A	100600	<b>ATL Applications</b>
41AA	100600 Lab Duplicate	ATL Applications
42A	100601	<b>ATL Applications</b>
43A	100602	ATL Applications
44A	100603	ATL Applications
45A	100604	<b>ATL Applications</b>
46A	100605	ATL Applications
47A	100171	ATL Applications
48A	100172	ATL Applications
49A	100173	<b>ATL Applications</b>
50A	100174	ATL Applications
50AA	100174 Lab Duplicate	ATL Applications
51A	100175	<b>ATL Applications</b>
52A	100176	<b>ATL Applications</b>
53A	100231	<b>ATL Applications</b>
54A	100232	<b>ATL Applications</b>

Continued on next page



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16512

DATE RECEIVED:

08/21/2009

CONTACT:

Ausha Scott

DATE COMPLETED:

09/16/2009

FRACTION# NAME 56A 100234

57A 100235 58A 100236 59A Method Blank 59B Method Blank

60A CCV TEST

**ATL Applications ATL Applications ATL Applications ATL Applications** 

**ATL Applications ATL Applications** 

CERTIFIED BY:

Sinda d. Fruman

09/16/09

**Laboratory Director** 



# LABORATORY NARRATIVE Hydrogen Sulfide by Radiello 170 Environmental Health & Engineering, Inc. Workorder# 0908456C

Eighteen Radiello 170 (H2S) samples were received on August 21, 2009. The procedure involves adsorption of H2S by zinc acetate to form zinc sulfide. The sulfide is then recovered by extraction with water and addition of ferric chloride in a strongly acidic solution to produce methylene blue. Methylene blue absorbance is then measured at 665 nm using a spectrophotometer. Results are reported in uG and uG/m3.

Sampling rate of 69 mL/min for H2S was provided by the manufacturer.

### **Receiving Notes**

A Temperature Blank was not included with the shipment. Temperature was measured on a representative sample and was not within  $4\pm2$  °C. Coolant in the form of blue ice was present. Analysis proceeded.

Sample collection dates were not provided on the Chain of Custody for all samples. The client was contacted and a dates were provided.

### **Analytical Notes**

Results were calculated based on 25 deg C without temperature correction. The actual exposure time was used to calculate sample concentrations and reporting limits.

An exposure time of 20000 minutes was used for the QC samples.

All media used for the sampling were supplied by the client. Blank subtraction was not performed on the sample results since the media used for Method Blanks may be from a different lot than the media used for the samples.

#### **Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit.
- J Estimated value.
- E Exceeds instrument calibration range.
- S Saturated peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- M Reported value may be biased due to apparent matrix interferences.
- N The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector



r1-File was requantified for the purpose of reissue

# Sample Results and Raw Data

ATL Application # 59 for RAD 170 (Hydrogen Sulfide) AIR TOXICS LTD. Spectrophotometer

Samphe ID.   Collection	Description of the last	0.30	0.00	- 5	CONTRACTOR	3		
Sample LD.   Collection   Analysis   Collection   Sample LD.   Collection   Analysis   Collection   Collect	г		3	3	805000	Z	0908456C-60A	8
Sample LLD   Collection   Analysis   Eactor   Eactor   Reporting Limit   Sample LLD   Collection   Analysis   Factor   Reporting Limit   Collection   Collectio	- 11							
Sample LLD   Collection   Analysis   Collection   Sample LLD   Collection   Analysis   Collection   Collect		929	UAN	1.92	6007/27/0	\$	0900100000	THE CHARLES CHARLES
Sample LD.         Cosinction         Analysis         Dutation         Reporting Limit           Sample LD.         Debtos         Analysis         Factor         Reporting Limit           05004/59C-41A         8/19/2009         8/25/2009         1,00         0,80           05004/59C-41AA         8/19/2009         8/25/2009         1,00         0,80           05004/59C-42A         8/19/2009         8/25/2009         1,00         0,80           05004/59C-45A         8/19/2009         8/25/2009         1,00         0,80           05004/59C-50A         8/19/2009         8/25/2009         1,00         0,80           05004/59C-50A         8/19/2009         8/25/2009         1,00         0,80           05004/59C-50A         8/19/2009         8/25/2009			•	8	0 POE PANA	NA I	00084560 500	Mothod Blank
Capacition   Cap		0.55	0.80	1.00	8/25/2009	K	0908456C-59A	Method Blank
Colored   Colo	1000							
Sample LD.         Consection         Analysis         Databan         Reporting Limit           Sample LD.         Date         Date         Date         Date         Pactor         Reporting Limit           0908456C-41AA         8/19/2009         8/25/2009         1,00         0,80           0908456C-42AA         8/19/2009         8/25/2009         1,00         0,80           0908456C-45AA         8/19/2009         8/25/2009         1,00         0,80           0908456C-50AA         8/19/2009         8/25/2009         1,00         0,80           0908456C-50AA         8/19/2009 <td>385</td> <td>0.55</td> <td>0.80</td> <td>1.00</td> <td>8/25/2009</td> <td>8/20/2009</td> <td>0908456C-58A</td> <td>100236</td>	385	0.55	0.80	1.00	8/25/2009	8/20/2009	0908456C-58A	100236
Sample LD.         Coercion         Analysis         Dallation         Reporting Limit           Sample LD.         Date         Date         Date         Date         Date         Part (eg)           0908456C-41A         8/19/2009         8/25/2009         1,00         0,80           0908456C-41AA         8/19/2009         8/25/2009         1,00         0,80           0908456C-42A         8/19/2009         8/25/2009         1,00         0,80           0908456C-43A         8/19/2009         8/25/2009         1,00         0,80           0908456C-43A         8/19/2009         8/25/2009         1,00         0,80           0908456C-43A         8/19/2009         8/25/2009         1,00         0,80           0908456C-45A         8/19/2009         8/25/2009         1,00         0,80           0908456C-50A         8/19/2009         8/25/2009         1,00         0,80           0908456C-50A         8/19/2009         8/25/		0.55	0.80	1.00	8/25/2009	8/20/2009	0908456C-57A	100235
Control   Cont								
Collection   Col		0.55	0.80	1.00	8/25/2009	8/20/2009	0908456C-56A	100234
Colorection   Analysis   Datton   Reporting Limit   Sample LD.   Date   Datton   Reporting Limit   Date   Date   Date   Datton   Reporting Limit   Date		0.55	0.80	1.00	8/25/2009	8/20/2009	0908456C-55A	100233
Colorection	107312							
Collection   Col	100	0.55	0.80	1.00	8/25/2009	8/20/2009	0908456C-54A	100232
Capacition   Cap	688	0.55	0.80	1.00	8/25/2009	8/20/2009	0908456C-53A	100231
Colorection								
Lab         Collection         Analysis         Dilution         Reporting Limit           Sample LD.         Date         Date         Factor         (ug)           0908456C-41A         8/19/2009         8/25/2009         1.00         0.80           0908456C-41AA         8/19/2009         8/25/2009         1.00         0.80           0908456C-42A         8/19/2009         8/25/2009         1.00         0.80           0908456C-43A         8/19/2009         8/25/2009         1.00         0.80           0908456C-43A         8/19/2009         8/25/2009         1.00         0.80           0908456C-45A         8/18/2009         8/25/2009         1.00         0.80           0908456C-49A         8/18/2009         8/25/2009         1.00         0.80           0908456C-50A         8/18/2009         8/25/2009         1.00         0.80           0908456C-50A         8/18/2009         8/25/2009         1.00         0.80		0.55	0.80	1.00	8/25/2009	8/18/2009	0908456C-52A	100176
Collection         Analysis         Dilution         Reporting Limit           Sample LID.         Date         Date         Pactor         (ug)           0908456C-41A         8/19/2009         8/25/2009         1.00         0.80           0908456C-41AA         8/19/2009         8/25/2009         1.00         0.80           0908456C-42A         8/19/2009         8/25/2009         1.00         0.80           0908456C-43A         8/19/2009         8/25/2009         1.00         0.80           0908456C-45A         8/18/2009         8/25/2009         1.00         0.80           0908456C-49A         8/18/2009         8/25/2009         1.00         0.80           0908456C-50A         8/18/2009         8/25/2009         1.00         0.80           0908456C-50AA         8/18/2009         8/25/2009         1.00         0.80		9.55	0.80	1.00	8/25/2009	8/18/2/009	0908436C-31A	6/1001
Collection         Analysis         Date Dutton         Reporting Limit           Sample Lin.         Date Dute Dute Dute Factor         (ug)           0908456C-41A         8/19/2009         8/25/2009         1.00         0.80           0908456C-41AA         8/19/2009         8/25/2009         1.00         0.80           0908456C-42A         8/19/2009         8/25/2009         1.00         0.80           0908456C-43A         8/19/2009         8/25/2009         1.00         0.80           0908456C-43A         8/19/2009         8/25/2009         1.00         0.80           0908456C-45A         8/19/2009         8/25/2009         1.00         0.80           0908456C-45A         8/19/2009         8/25/2009         1.00         0.80           0908456C-45A         8/19/2009         8/25/2009         1.00         0.80           0908456C-48A         8/18/2009         8/25/2009         1.00         0.80           0908456C-49A         8/18/2009         8/25/2009         1.00         0.80           0908456C-50A         8/18/2009         8/25/2009         1.00         0.80           0908456C-50AA         8/18/2009         8/25/2009         1.00         0.80           0908456C								
Lab         Collection         Analysis         Dilution         Reporting Limit           Sample LD.         Date         Date         Date         Date         Dilution         Reporting Limit           0908456C-411A         8/19/2009         8/25/2009         1.00         0.80           0908456C-41AA         8/19/2009         8/25/2009         1.00         0.80           0908456C-42A         8/19/2009         8/25/2009         1.00         0.80           0908456C-43A         8/19/2009         8/25/2009         1.00         0.80           0908456C-44A         8/19/2009         8/25/2009         1.00         0.80           0908456C-45A         8/19/2009         8/25/2009         1.00         0.80           0908456C-46A         8/19/2009         8/25/2009         1.00         0.80           0908456C-48A         8/18/2009         8/25/2009         1.00         0.80           0908456C-48A         8/18/2009         8/25/2009         1.00         0.80           0908456C-49A         8/18/2009         8/25/2009         1.00         0.80           0908456C-50A         8/18/2009         8/25/2009         1.00         0.80		0.55	0.80	1.00	8/25/2009	8/18/2009	0908456C-50AA	100174 Duplicate
Lab         Collection         Analysis         Dilution         Reporting Limit         Reportin	03000E	0.55	0.80	19	8/25/2009	8/18/2009	0908456C-50A	1001/4
Lan         Collection         Analysis         Dilution         Reporting Limit         Reportin	13133							
Collection         Analysis         Dilution         Reporting Limit         Reporting Limit         Reporting Limit         Limit         Reporting Limit         Reporting Limit         Reporting Limit         Reporting Limit         Reporting Lim	: H	0.55	0.80	1.00	8/25/2009	8/18/2009	0908456C-49A	100173
Lan         Collection         Analysis         Dilution         Reporting Limit         Limit         Reporting Limit <td>1616</td> <td>0.55</td> <td>0.80</td> <td>1.00</td> <td>6002/52/8</td> <td>SUB/ZU09</td> <td>0900430C-40A</td> <td>7/1001</td>	1616	0.55	0.80	1.00	6002/52/8	SUB/ZU09	0900430C-40A	7/1001
Lan         Collection         Analysis         Dilution         Reporting Limit         Limit         Reporting Limit         Limit         Reporting Limit	# X S C E C							
Lab         Collection         Analysis         Dilution         Reporting Limit           Sample LD.         Date         Date         Factor         (ug)           0908456C-41AA         8/19/2009         8/25/2009         1.00         0.80           0908456C-41AA         8/19/2009         8/25/2009         1.00         0.80           0908456C-42A         8/19/2009         8/25/2009         1.00         0.80           0908456C-43A         8/19/2009         8/25/2009         1.00         0.80           0908456C-45A         8/19/2009         8/25/2009         1.00         0.80           0908456C-45A         8/19/2009         8/25/2009         1.00         0.80	<ul> <li>1 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3</li></ul>	0.55	0.80	1.98	8/25/2009	8/18/2009	0908456C-47A	100171
Lab         Collection         Analysis         Dilution         Reporting Limit         Reportin	rs 13	0.55	0.80	1.00	8/25/2009	8/19/2009	0908456C-46A	100605
Collection   Col	100 PE	0.55	0.80	1.00	8/25/2009	8/19/2009	0908456C-45A	100604
Collection   Analysis   Dilution   Reporting Limit   Reporting L	2002	0.55	0.80	1.00	8/25/2009	8/19/2009	0908456C-44A	100603
Collection   Analysis   Dilution   Reporting Limit   Reporting L	100 8	0.55	0.80	1.00	8/25/2009	8/19/2009	0908456C-43A	100602
Collection Analysis Dilution Reporting Limit Reporting Limit   R	2000							
Collection Analysis Dilution Reporting Limit Reporting Limit Sample LD.   Date   Date   Factor (ug) (ug/m3)	1980	0.55	0.80	1.00	8/25/2009	8/19/2009	0908456C-42A	100601
Collection Analysis Dilution Reporting Limit	oni Bi	0.55	0.80	1.00	8/25/2009	8/19/2009	0908456C-41AA	100600 Duplicate
Sample LD. Date Factor (ug)		0.55	0.8.0	1.00	6002/02/8	6002//81/9	0900450C-41A	ICCOOC
Lan Collection Analysis Dilution Reporting Limit Reporting Limit		(ug/m3)	(gu)	ractor	Date	Date	Sample LD.	Torono
		Reporting Limit	Reporting Limit	Dilution	Analysis	Collection		Sample I D

COMMENTS: 1. NA=Not Applicable

2. ND=Not Detected

3. Exposure time of 20000 minutes was assumed for the QC samples and samples 100604, 100605, 100176 and 100236.

4. Background subtraction not performed.

Hydrogen Sulfide Radiello Calculation Worksheet

Workorder #: [0908456C ] Sampling Rate (ng/ppb.min) 0.096 T		Date of Analysis: 8/25/2009	0.096	LabSampleID Client	41A 100600	41AA 100600 Duplicate	42A 100601	43A 100602	44A 100603	45A 100604	46A 100805		47A 100171				1001												
0.096 Typically0.096 for HZS	25 Typically 25	2009	Takes into account temp	Date of Collection	8/19/2009	8/19/2009	8/19/2009	8/19/2009	8/19/2009	8/19/2009	8/19/2009	8/18/2009		8/18/2009	8/18/2009 8/18/2009	8/18/2009 8/18/2009 8/18/2009	8/18/2009 8/18/2009 8/18/2009 8/18/2009	8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/18/2009	8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/18/2009	8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/20/2009	8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/20/2009	8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/20/2009 8/20/2009	8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/20/2009 8/20/2009 8/20/2009	8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/20/2009 8/20/2009 8/20/2009 8/20/2009	8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/20/2009 8/20/2009 8/20/2009 8/20/2009 8/20/2009	8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/20/2009 8/20/2009 8/20/2009 8/20/2009 8/20/2009 8/20/2009	8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/20/2009 8/20/2009 8/20/2009 8/20/2009 8/20/2009 8/20/2009	8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/20/2009 8/20/2009 8/20/2009 8/20/2009 8/20/2009	8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/18/2009 8/20/2009 8/20/2009 8/20/2009 8/20/2009 8/20/2009
×	,	U	emp	A.	0539	0.538	0.151	0.384	0.376	0.015	0.013	0.154	0.173		0.287	0.287	0.287 0.188 0.188	0.287 0.188 0.188 0.163	0.287 0.188 0.188 0.163 0.0014	0.287 0.188 0.188 0.163 0.014 0.198	0.287 0.188 0.188 0.163 0.014 0.198	0.287 0.188 0.188 0.163 0.014 0.198 0.193	0.287 0.188 0.163 0.014 0.193 0.171 0.083	0.287 0.188 0.188 0.163 0.004 0.198 0.193 0.171 0.093	0.287 0.188 0.188 0.163 0.004 0.198 0.193 0.193 0.0171 0.0033 0.005	0.287 0.188 0.188 0.163 0.004 0.198 0.193 0.171 0.003 0.005	0.287 0.188 0.188 0.163 0.004 0.198 0.193 0.171 0.033 0.005	0.287 0.188 0.163 0.0014 0.193 0.193 0.171 0.093 0.095 0.0014	0.287 0.188 0.163 0.0014 0.193 0.193 0.171 0.033 0.095 0.014
				Duration (min)	19850	19850	19850	19850	19850	19963	19963	19963		19963	19963 13963	19963 19963	19963 19963 19963	19963 19963 19963	19963 19963 19963 19963	19963 19963 19963 19963 19963 19963 19712	19963 19963 19963 19963 19963 19963 19972	19963 19963 19963 19963 19963 19972 19772	19983 19983 19983 19983 19983 19972 19772 19772	19983 19983 19983 19983 19983 19972 19772 19772 19772	19963 19963 19963 19963 19963 19712 19712 19712 19712 19712	19963 19963 19963 19963 19963 199712 19712 19712 19712 19712 19712	19963 19963 19963 19963 19963 199712 19712 19712 19712 19712 19712	19983 19983 19983 19983 19983 19983 19712 19712 19712 19712 19712 19712	19963 19963 19963 19963 19963 199712 19712 19712 19712 19712 19712 19712 19713
				무	100	100	100	160	100	100	100	100	100		100	5 6	6 6 6	100	100	5 5 5 5 5 5					100 100 100 100 100 100 100 100 100 100	100 100 100 100 100 100 100 100 100 100			
	(Abs-Y-int)xDF	Siope		Conc (ug/ml.) of sulfide	0.493674332	0.492717189	0.122302558	0.345317051	0.337659901	-0.007868992	-0.009783279	0.125173989	0.14335972	0.252474108		0.157716877	0.157716877	0.157716877 0.157716877 0.133788283	0.157716877 0.157716877 0.133788283 -0.008826136	0.157716877 0.157716877 0.133788283 -0.008826136 0.167288314	0.157716877 0.157716877 0.133788283 -0.008826136 0.167288314 0.162502595	0.157716877 0.157716877 0.133788283 -0.008826136 0.167288314 0.162502595 0.141445433	0.157716877 0.157716877 0.133788283 -0.008826136 0.167288314 0.162502595 0.141445433 0.009359596	0.157716877 0.157716877 0.133788283 -0.008826136 0.167288314 0.162502595 0.141445433 0.009359596	0.157716877 0.135778283 -0.00826136 0.167288314 0.162502595 0.141445433 0.009359596 0.068702508	0.157716877 0.1537786283 -0.008826136 0.157288314 0.165202595 0.141445433 0.009359596 0.068702508 -0.008826136	0.157716877 0.157716877 0.133788283 -0.008826136 0.167288314 0.162502595 0.141445433 0.009359596 0.068702508 -0.008826136 -0.0022226148	0.157716877 0.157716877 0.133788283 -0.008826136 0.1672602595 0.141445433 0.009359596 0.068702508 -0.008826136 -0.0022226148 -0.0022226148	0.157716877 0.157716877 0.153788283 -0.008826136 0.167282314 0.162502595 0.141445433 0.009359596 0.068702508 -0.008826136 -0.0022226148 -0.0022226148 -0.00297561
	Conc(ug/mL)xVol (mL)			Conc (ug) of sulfide	5.18358049	5.173530481	1.284176859	3.62582904	3.545428965	-0.082624414	-0.102724433	1.314326887	1.505277065		2.650978132	2.650978132 1.656027205	2.650978132 1.656027205 1.6560277205	2.650978132 1.656027205 1.656027205 1.404776971	2,650978132 1,656027705 1,656027705 1,404776971 -0,092674424	2.650978132 1.656027205 1.656027205 1.656027205 1.404776971 -0.092674424 1.756527299	2.650978132 1.656027205 1.656027205 1.404776971 -0.092674424 1.756527299 1.706277252	2.650978132 1.656027205 1.656027205 1.404776971 -0.092674424 1.756527299 1.706277252	2.650978132 1.656027205 1.656027205 1.404776971 -0.092674424 1.756527299 1.706277252 1.485177046 0.098275754	2.650978132 1.656027205 1.656027205 1.404776971 -0.092674424 1.756527299 1.706277252 1.485177046 0.098275754 0.721376335	2.650978132 1.656027205 1.656027205 1.404776971 -0.092674424 1.756527299 1.706277252 1.485177046 0.098275754 0.721376335 -0.0922674424	2.650978132 1.656027205 1.656027205 1.404776971 -0.092674424 1.756527299 1.706277252 1.485177046 0.098275754 0.721376335 -0.092674424 -0.233374555	2.650978132 1.656027205 1.656027205 1.404776971 -0.092674424 1.756527729 1.7062777252 1.485177046 0.098275754 0.721376335 -0.092674424 0.721376355	2.650978132 1.656027205 1.656027205 1.404776971 -0.092674424 1.7565277252 1.485177046 0.098275754 0.098275754 0.721376335 -0.092674424 0.233374555 -0.052474386	2.650978132 1.656027205 1.656027205 1.404776971 -0.092674424 1.756527729 1.706277752 1.485177046 0.098275754 0.721376335 -0.092674424 -0.233374555 -0.052474386 -0.072574405
	conc (ug sulfide) *MW H2S	MAA 2011106		Conc (ug) of H2S	5.508786725	5.498106201	136474324	3.853305436	3.76786124	-0.087808085	-0.109169134	1.396784813		1599714778	1.599/14/78 2.817294565	1.599/14/78 2.817294565 1.759922644	1.5997/4778 2.817294565 1.759922644 1.759922644	1.5917.478 2.817294565 1.759922644 1.759922644 1.490290533	1.59171478 2.817294565 1.759922644 1.759922644 1.492909533 -0.098488609	1.5977478 2.817294565 1.75922644 1.75922644 1.49290533 -0.098488609 1.866727889	1.599714778 2.817294565 1.759922644 1.759922644 1.759922644 1.492909533 -0.098488609 1.866727889 1.813325267	1.59174778 2.817294565 1.759922644 1.759922644 1.759922644 1.492909533 -0.098488609 1.866727889 1.813325267 1.578353729	1.599714778 2.817294565 1.759922644 1.759922644 1.759922644 1.492909533 -0.098488609 1.866727889 1.813325267 1.578353729 0.104441355	1.599714778 2.817294565 1.759922644 1.759922644 1.492909533 -0.098489609 1.866727889 1.813325267 1.578353729 0.104441355 0.766633871	1.599714778 2.817294565 1.759923644 1.759923644 1.492909533 -0.098488609 1.816325267 1.578353729 0.104441355 0.766633871 -0.098488609	1.599/14/78 2.817294565 1.759922644 1.759922644 1.492909533 -0.098488609 1.816325267 1.578353729 0.104441355 0.766633871 -0.098488609 0.248015952	1.599/14/78 2.817294565 1.759922644 1.759922644 1.492909533 -0.098488609 1.81325267 1.578353729 0.104441355 0.76663871 -0.098488609 0.248015952 -0.248015952	1.599/14/78 2.817294565 1.759922644 1.759922644 1.492909533 -0.098488609 1.813325267 1.578353729 0.104441355 0.766638871 -0.098488609 -0.248015952 -0.055766512	1.599/14/78 2.817294565 1.759922644 1.759922644 1.492909533 -0.098488609 1.81325267 1.578353729 0.104441355 0.766633871 -0.098488609 -0.248015952 -0.055766512 -0.077127561
Q includes conversion from Sulfide to HZS	20	Cx Duration	T Corrected, no Blank correction	Conc (ppb) of HZS	2.720	2.715	0.674	1.903	1.861	-0.043	-0.054	0.686	2	0./85	1.383	1.383	1.383 0.864 0.864	1.383 0.364 0.864 0.733	0.763 0.864 0.864 0.733 -0.048	0.763 0.864 0.864 0.733 -0.048 0.928	0.765 0.864 0.864 0.733 -0.048 0.902	0.765 0.864 0.864 0.733 -0.048 0.902 0.785	0.765 0.864 0.864 0.733 -0.048 0.902 0.785 0.052	0.765 0.864 0.864 0.733 -0.048 0.902 0.785 0.052	0.765 0.864 0.864 0.733 -0.048 0.902 0.902 0.785 0.052 0.381	0.785 0.864 0.864 0.733 -0.048 0.902 0.902 0.785 0.052 0.052 0.381 -0.048	0.785 0.864 0.864 0.733 -0.048 0.902 0.902 0.785 0.052 0.052 0.381 -0.048 #DIV/I0i	0.765 1.383 0.864 0.864 0.733 -0.048 0.902 0.785 0.052 0.381 -0.048 #DIV/0i #DIV/0i -0.027	0.765 1.383 0.864 0.864 0.733 -0.048 0.902 0.785 0.052 0.381 -0.048 #DIV/0! #DIV/0! -0.027 -0.038
	ppbx mw	24.45	lank correction	Conc (ug/m3) of HZS	3,792	3.784	6660	2652	2593	-0000	-0075	0.956	1.095	19%	7.760		12 15 E	1205 1205 1022	1205 1205 1205 1005	1205 1205 1022 1022	1205 1205 1002 1002 1005 1294	1205 1205 1002 1002 1294 1294	1205 1102 1005 1102 1294 1294 1097	1.206 1.206 1.007 1.007 1.204 1.207 1.204 0.007 0.007	1.205 1.205 1.005 1.005 1.254 1.254 0.072 0.051	1.205 1.205 1.205 1.022 -0.067 1.254 1.257 1.094 0.077 0.031	1.205 1.205 1.205 1.022 -0.067 1.294 1.257 1.094 0.007 0.051 -0.067	1.205 1.205 1.205 1.0057 1.294 1.257 1.094 0.0072 0.031 4004/01 4004/01	1.205 1.205 1.022 -0.067 1.254 1.257 1.094 0.0072 0.051 -0.067 4004/01 4004/01

Verified: HH and AW on 9/4/09

Color Priento/Color   Rit (py) mit/viol (mt)			4.347814661	6.352548156	ß	0.39	0.798966249	0.752	0.072
Rut(ug) of sufficide   MANY HZS   Rut (lags selfficide)   MANY Selfficide   Day					8	0.39	0.798966249	0.752	0.072
Rullug/ml\bVoi [mt]   Rullug salfide) *MW H2S   Rullug salfide) *MW Salfide bHS   Rullug salfide) *MW Salfide bHS   Rullug salfide) *MW Salfide   Rullug salfide) *MW Salfide   Rullug salfide) *MW Salfide   Rullug salfide) *Rullug salfide) *Ru					830	0.39	0.798966249	0.752	0.072
Rullug/ml\bVoi [mt]   Rullug sulfide) *MW H2S   Rullug sulfide) *MW Sulfide to H2S   Rullug sulfide) *MW Sulfide   Rullug sulfide) *MW Sulfide   Rullug sulfide) *MW Sulfide   Rullug sulfide			#DIV/0!	ND	#DIV/0!	#DIV/0i	0.798966249	0.752	0.072
Calindade to NAMO (mt)   RL (ug. sulfide) *NAM HZS   RL (ug/ x 1000)   Ppbx mw   Fraction to Blank correction to Blank corre			#DIV/0!	ND	#DIV/O!	#DIV/0i	0.798966249	0.752	0.072
Clinicides comerosion from   RL (ug/ sulfide)   NAW HZS   RL (ug/ sulfide)   PAW HZS   PAW			6		83	0.39	0.798966249	0.752	0.072
RILlug/milyvoi (mt)   RILlug: sufficie ** Mary Sufficie to H252   RILlug/n 1,0000   Pubr. may   File to H252   RILlug/n 1,0000   Rillug/m3)   Result (ug/m3)   Result (ug/			6		055	0.40	0.798966249	0.752	0.072
RLIUgy mit   RLIUg sufficide   **MWY HZS   RLIUgil   2000   24.4.5   Calibration   Data			6		83	0.40	0.798966249	0.752	0.072
RIL(ug/mit)Mol (mit)   RIL(ug salfide) *MMW H2S   RIL(ug) of H2S   RIL(u			1.094013078	1.578353729	220	0.40	0.798966249	0.752	0.072
RL(ug/mt)MVo (mt)   RL(ug/stifide) *M/W H2S   RL(ug/stifide) *Data			1.256880203	1.813325267	830	0.40	0.798966249	0.752	0.072
RIL(lug/mil)AVOI (mil.)   RIL lug sulfide   **MAW H25   All lug   x 1000   Dabx maw			1.293895459	1.866727889	83	0.40	0.798966249	0.752	0.072
RILlug/mit/viol (mit)   RILlug sulfide  **MW HZIS   Allug  x 1000   Dabx mw   Dabx m			6		82	0.39	0.798966249	0.752	0.072
Rtl(ug/mt]AVol (mt)   Rtl(ug sulfide) **AWY HZS   Rtl(ug/l x 1000)   200x mw   24.45			1.021778001	1.492909533	230	0.39	0.798966249	0.752	0.072
RL(ug/mL)AVol (mL)   RL(ug_sulfide) *MAW H2S   RL(ug) x 1000   Ephx maw   Calibration Data   Calibration D			1.204527268	1.759922644	23	0.39	0.798966249	0.752	0.072
Rt(lug/mt\bMoi (mt)   Rt(lug sulfide) *MW H725   Rt(lug) x 10000   ppbx mw   Dpbx mw			1.204527268	1.759922644	830	0.39	0.798966249	0.752	0.072
RIL(ug/ml.)xVol (ml.)   RIL (ug. sulfide) *MW HZS   RIL(ug) x 1000   pobx mw   Calibration   Part			1.928214365	2.817294565	220	0.39	0.798966249	0.752	0.072
Rtl(ug/mtl)xVol (mtl)   Rtl (ug sulfide) *MW H2S   Rtl (ug/lx 1000)   Dibx mw   Calibration Data   Dibx mw   Calibration Data   Calibratic Data			1.094877708	1599714778	830	0.39	0.798966249	0.752	0.072
RL(ug/ml,\t)xVol (ml,   RL (ug sulfide) *MW H2S   RL (ug) x 1000   Dpbx mw   Dpbx mw   Dpbx mw   Dpbx mw   T Corrected, no Blank correction   RL (ug) ml Sulfide to H2S   RL (ug) ml Sulfide   Ax Duration   Dpbx mw   T Corrected, no Blank correction   Ug/ml of H2S   RL (ug) ml Sulfide   Ax Duration   Data   T Corrected, no Blank correction   Ug/ml of H2S   RL (ug/m3)   Result (ug/m3)   Result (ug/m3)   Result (ug/m3)   Result (ug/m3)   Ug/ml of H2S   S.498106201   3.784438715   0.798966249   0.39   0.35   0.55   5.498106201   3.784438715   0.0716   0.080   0.752   0.798966249   0.39   0.35   0.555   1.36474324   0.939375662   0.143   0.169   0.752   0.798966249   0.39   0.35   0.555   3.853306436   2.652294761   0.286   0.328   0.752   0.798966249   0.39   0.35   0.555   3.76786124   2.593482088   0.577   0.637   0.637   0.752   0.7520   0.798966249   0.39   0.35   ND   ND   ND   ND   ND   ND   ND   N			0.955988265	1.396784813	0.55	0.39	0.798966249	0.752	0.072
RL(ug/mL)xVol (mt)   RL (ug suifide) *MW H2S   RL (ug) x 1000   Dbx mw   Dbx mw   Dbx mw   Dbx mw   Calibration Data			8		055	0.39	0.798966249	0.752	0.072
RL(ug/mL)xVol (mt)   RL (ug sulfide) *MW H2S   Sulfide to H2S   Dpbx mw   Dpbx mw   Dpbx mw   Dpbx mw   Calibration Data			8		0.55	0.39	0.798966249	0.752	0.072
RL(ug/ml)xVol (ml)   RL (ug suifide) *MAW H2S   RL (ug) x 1000   90bx mw   24.45     Calibration Data   Calibration Data			2.593482088	3.76786124	0.55	0.39	0.798966249	0.752	0.072
Calibration			2.652294761	3.853305436	055	0.39	0.798966249	0.752	0.072
Calibration	72		0.939375662	1.36474324	820	0.39	0.798966249	0.752	0.072
Calibration	Y-int		3.784438715	5.498106201	055	0.39	0.798966249	0.752	0.072
RL(ug/mL)xVol (mL) RL (ug suifide) *MAW H2S RL (ug) x 1000 RL (ug) RL (ug) x 1000 RL (ug) max Result (ug) H2S RL (ug) max Result (ug) H2S RL (ug) max Result (ug) H2S RL (ug) max Result (ug) max Result (ug) H2S RL (ug) max Result (ug) H2S RL (ug) max Result (ug) m		0		5.508786725	0.55	0.39	0.798966249	0.752	0.072
RL(ug/mL)xVol (mL) RL (ug sulfide) *MW H2S RL (ug) x 1000 RL (ug sulfide) *MW H2S RL (ug) x 1000	Ħ	*	%Rec		RL (ug/m3)	RL (ppb) of HZS	Conc (ug) of HZS	RL (ug) of sulfide	RL(ug/ml) of sulfide
RL(ug/mL)xVol (mL)  RL (ug sulfide) *MW H2S  RL (ug) x 1000  R			lank correction	T Corrected, no B					
Q includes conversion from  Q includes conversion from  Sulfide to HZS  RL (ug/mL)xVol (mL) RL (ug sulfide) *MW HZS RL (ug) x 1000 ppbx mw  Calibration Data					24.45	Q x Duration	MW Sulfide		
	8/25/2009 Linear Re		_		wm xdqq	RL (ug) x 1000	RL (ug sulfide) *MW H2S	RL(ug/mL)xVol (mL)	Low PointxDF
Q includes conversion from	Calibration Date					Sulfide to HZS			
						Q includes conversion from			

# QC Results and Raw Data

# Spectrophotometer Logbook

@Air Toxics Ltd.

Log Book #: 1564

Work Order: 6968456 40

Date: 8/25/09

Analyst: A. Toyama

Method: Rad 170
Wavelength: (alo 5

Prep. Notes:

Sta	ndard ID	Concentration	ABS	
185	8 -20- E	0.0716 US ML	0.088	
	-D	0.143	0.169	r = 0.999411
	-c	0.286	0.328	m = 1.044775
	- B	0.572	0.637	b = 0.023221
-	J A	1.145	1.611	

Fraction	Dilution	ABS	Sample ID	Sample Volume
41A.	1.00	0.539	100600	10.5 mL
42A		0.151	601	
<u>43.A</u>		0.384	602	
YUA		0.376	605	
45A		0.015	604	
46A		0.013	605	
414		0.154	171	
<u> 48A</u>		0.173	172	
<u>49A</u>		0.287	113	
SOA		0.188	174	
514		0.163	175	
52A		0.014	170	
524		0.198	731	
27/1		0.193	232	
53/7		0.171		

Notes:	Code 170	Lot 09075	EXP	04/010	used	for	Blanks.	Sample	10+5
	unknown.							71.	

Page 28

Signed:

Date: 8/20

Revised 05/07

# Spectrophotometer Logbook

@Air Toxics Ltd.

Log Book #: 1564

Work Order: 0968456 (D

Analyst: A. Toyama

Method: Rad 170
Wavelength: (eles

Prep. Notes: cont. from page 28

	ABS	Concentration	Standard ID
<b>i</b>	D.088	0.0716 49 mc	1858-20-E
_ r =	0.169	0.143	<u> </u>
m =	0.328	0.286	c
b =	0.637	0.572	- 13
-	1.211	1.145	. *'A

Fraction	Dilution	ABS	Sample ID	Sample Volume
56A 57A 58A 41AA	1,00	0.033 0.095 0.014 0.538	100 234	10.5mL
SO AA BIX BIX Planton COO LCS/CO		0.018 0.018 0.018	1714 NA 	
		The state of the s		
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	1	***************************************	The state of the s	And the second of the second o

Notes: LCS/CCV prapared at 0.572 10/m

Page 29

Signed:\_\_\_

Date: 8/26/09

Spectrophotometer Standard Preparation Log	@Air Toxics Ltd. Log Book #: 1858
Standard ID: 1858-18  Project: Ferric Chloride Time 8/24/07  Analyst: A. Torjama  Preparation Date: 8/25/09	Solvent: DI Ha Solvent Lot #: NA
Expiration Date: 2509	
Procedure/Comments: Dissolve 25 g of femic Lot 73297 mJ) in 125 mL of DI 120	chloride hexalydrate Clarated ERZC
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Spectrophotometer Standard Preparation Log	@Air Toxics Ltd.	Log Book #: _18
Standard ID: <u>1858-19</u>	Salvanti	11 0
Project: Ferric Chloride -amine	Solvent: DE	1420
Analyst: A. To-James	Solvent Lot #:	N/A
Analyst: A. To-famo		
Expiration Date: 8 25 09		
Procedure/Comments: Mix 10 mL of femice	chloride solution	with som
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/		CAMPAGE CONTRACTOR OF THE PARTY
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e 19 Signed Date		8/05/09
e 19 Signed Date	Reviewed	Date Rev. 8/97

Spectrophotometer Standard Preparation Log	@Air Toxics Ltd.	Log Book #: <u>1858</u>
Standard ID: 1858-20 Project: Calibration Solution RAD 170 Analyst: A. Toyama Preparation Date: 82509 Expiration Date: 82509	Solvent: DI	H2O NA
Procedure/Comments:		
Solution A: Eml of Cook RAD 171/1476-986 DI HZO : 1.145 " ml Sul		ERIB) with 98 m
Solution B: 25 ml of Solution A with 2	5 mL of DI 140	0.572 W
Solution C: 1.25 ml of Solution A with 3	75 ML of DI HED	= 0.286 " mi
Solution D: 0.625ml of Solution A with	4.375 ml of DI 4.0	D. 143 " )/mL
Solution E: 0.375 of Solution A with 5.6	solution) plesson	" 0.0716 " JIML
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		*4 <sub>12</sub>
Ly. (4has 8/25/09		8/25/09
Page 20 Signed Date	Reviewed	Date Rev. 8/97

# **Shipping/ Receiving Documents**



# 180 Blue Ravine Road, Suite B Folsom, CA 95630

# Phone (916) 985-1000 FAX (916) 985-1020 Hours 8:00 A.M. to 6:00 P.M. Pacific

COMPANY:	Environmental Health & Engineering, Inc.	
ATTENTION:	Mr. Taeko Minegishi	
FAX #:	781-247-4305	
FROM:	Sample Receiving	
Workorder #:	0908456C	
# of pages (Including Cover):	4	
0/17/2000		

9/17/2009

Thank you for selecting Air Toxics Ltd. We have received your samples and have found no discrepancies. In order to expedite analysis and reporting, please review the attached information for accuracy. Corrections can be faxed to Ausha Scott at 916-985-1020.

ATL will proceed with the analysis as specified on the Chain of Custody and Sample Login page.

# **Environmental** Health & Engineering, Inc.

33A 34A

# **CHAIN OF CUSTODY FORM**

DATE: Ztima	0	9	0	8	4	5	6
DATE: 21 A	C	q	59				

FROM: Environmental Health and Engineering, Inc. 117 Fourth Avenue

						Needham,	MA 02494-272	5		
	то:	IIB	Toncs			Please send invo				
	-					<ul> <li>Please send reper</li> </ul>	orts to ATTN: Da	ata Coordina	ator	
	In all corre	spondend	e regarding t	his matter, plea	se refe	er to EH&E Project # _	16512			
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	Each sig	natory	please retu	urn one copy	of the	nls form to the ab	ove address	8/20	৩৭	
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	Received b	by: 10 (2)	2 085			y name) ATC		Date: 8/2//	99	
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	Relinquish	ed by:		of (c	ompan	y name)		Date:		
	Received b	y:		of (c	ompan	y name)		Date:		
	Lab Data Received b	y:		of Er	vironn	nental Health & Engine	ering, Inc. D	)ate:		
							P	age 3	of 4	

**Environmental** Health & Engineering, Inc.

SOA SIA

52A 53A SYA 55A 56A 571 SXA

0908456

**CHAIN OF CUSTODY FORM** DATE: 21 AUG 009 FROM: Environmental Health and Engineering, Inc. 117 Fourth Avenue

то: Д	IR TEXICS			eedham, MA 02494-	
				send involces to ATT send reports to ATTN	N: Accounts Payable N: Data Coordinator
In all correspo	ndence regarding th	nis matter, pleas	e refer to EH&E Pr	oject #16512	<u> </u>
The cost of thi	s analysis will be co	overed by EH&E	Purchase Order #	16512	
	ata Coordinator - Ul				-
SAMPLE ID	SAMPLE TYPE	AN	ALYTICAL METHO	DD/NUMBER	OTHER:Time/Date/Vol.
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Lab Data					
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					Page $\frac{4}{}$ of $\frac{4}{}$



### SAMPLE RECEIPT SUMMARY

### WORKORDER 0908456C

Client Date Promised: 09/01/09 11:59 pm

Mr. Taeko Minegishi
Environmental Health & Boo-825-5343
Engineering, Inc.

Phone
Date Completed: 9/16/09

Boo-825-5343
Date Received: 8/21/09

Fax
PO#: 16512

Sales Rep: TL Total \$: \$1,000.00
Logged By: MW

I	raction	Sample #	<b>Analysis</b>	Collected	Amount\$
4	1A	100600	ATL Applications	8/19/2009	\$50.00
4	1AA	100600 Lab Duplicate	ATL Applications	8/19/2009	\$0.00
4	2A	100601	ATL Applications	8/19/2009	\$50.00
4	3A	100602	ATL Applications	8/19/2009	\$50.00
4	4A	100603	ATL Applications	8/19/2009	\$50.00
4	5A	100604	ATL Applications	8/19/2009	\$50.00
4	6A	100605	ATL Applications	8/19/2009	\$50.00
4	7A	100171	ATL Applications	8/18/2009	\$50.00
4	-8A	100172	ATL Applications	8/18/2009	\$50.00
4	9A	100173	ATL Applications	8/18/2009	\$50.00
5	0A	100174	ATL Applications	8/18/2009	\$50.00
5	0AA	100174 Lab Duplicate	ATL Applications	8/18/2009	\$0.00
5	1 <b>A</b>	100175	ATL Applications	8/18/2009	\$50.00
5	2A	100176	ATL Applications	8/18/2009	\$50.00
5	3A	100231	ATL Applications	8/20/2009	\$50.00
5	4A	100232	ATL Applications	8/20/2009	\$50.00
5	5A	100233	ATL Applications	8/20/2009	\$50.00
5	6A	100234	ATL Applications	8/20/2009	\$50.00
5	7A	100235	ATL Applications	8/20/2009	\$50.00
5	8A	100236	ATL Applications	8/20/2009	\$50.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.

Atlas Project Name/Profile#: CPSC Indoor Air Monitoring/13297

BILL TO: Accounts Payable

Environmental Health & Engineering, Inc.

117 Fourth Avenue

Needham, MA 02494

TERMS:

Reporting Method: ATL Application #59 H2S-Radiello 170

Analysis Code: Other GC



### SAMPLE RECEIPT SUMMARY Continued

Client Date Promised: 09/01/09 11:59 pm
Phone Date Completed: 0/16/09

Mr. Taeko Minegishi
Environmental Health & 800-825-5343 Date Received: 8/21/09
Engineering, Inc. Fax PO#: 16512

117 Fourth Avenue 781-247-4305 Project#: 16512 Needham, MA 02494

Sales Rep: TL Total \$: \$ 1,000.00 Logged By: MW

<b>Fraction</b>	Sample #	<b>Analysis</b>	Collected	Amount\$
59A	Method Blank	ATL Applications	NA	\$0.00
59B	Method Blank	ATL Applications	NA	\$0.00
60A	CCV	ATL Applications	NA	\$0.00
Misc. Charg	ges eCVP (20) @ \$5.00 each.			\$100.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.

Atlas Project Name/Profile#: CPSC Indoor Air Monitoring/13297

BILL TO: Accounts Payable

Environmental Health & Engineering, Inc.

117 Fourth Avenue Needham, MA 02494

Analysis Code: Other GC

TERMS:

Reporting Method: ATL Application #59 H2S-Radiello 170

#### **Sample Discrepancy Report** Identification Discrepancy Type: $\square$ 1. $\boxtimes$ 2. $\square$ 3. Initiated By: MW Project ID:13297 **PM**: BL **Date**: 8/21/2009 Workorder(s) affected:0908456 Sample(s) affected: all 1. Sample Receipt Discrepancies Narration Required in Lab Narrative and **Narration Not Required:** Sample Confirmation: 1.1. Sample container (cartridge/tube/VOA vial) was 1.5. COC was not filled out in ink. received broken, however sample was intact. 1.6. COC improperly relinquished / received. 1.2. No brass cap on canister. 1.7. Sample tags / can numbers do not match the COC. 1.3. Date of Collection noted on first sample, but no 1.8. ☐ Sample date ☐ error / ☐ missing on COC but arrow down to indicate all samples. noted on sample tag (check one). Notify Lab for further determination: 1.9. Custody Seal on the outside of the container was □ broken / □ improperly placed (check one). 1.4. Tedlar bag received with minimal volume. 1.10. ☐ ID-none on the sample Tag/Blank Initials: \_\_\_\_ Date: 1.11. Other (describe below). **Describe the Discrepancy:** 2. Sample Receipt/Screening Discrepancies requiring PM notification Document on Cover Page of Sample Receipt Confirmation and in Receiving Notes of Lab Narrative If Section II. is filled out PM must be notified within 24 hrs of initiation 2.1. COC was not received with samples. 2.12. Sorbent samples-sampling volume was not provided 2.2. ☐ Analysis method(s) is ☐ not specified / ☐ incorrectly specified (check one) on the COC. 2.13. Flow controller used – canister samples 2.3. Incorrect sampling media / container for analysis received at ambient or under pressure. requested. 2.14. Canister was at ambient pressure at time of 2.4. Number of samples on the COC does not match the pressurization and (check all that apply): number of samples that were received. ☐ Canister failed leak check on two manifolds, Canister valve was open, 2.5. Samples were received expired. ☐ Brass nut was loose/not present. 2.6. Sampling date (time for sulfur) is not documented ☐ Sample can be analyzed ☐ Cannot be analyzed $\square$ some $/ \boxtimes$ any samples (check one). 2.15. Canister sample received with a vacuum difference 2.7. $\square$ Sample received with amount of H<sub>2</sub>O in the Tedlar >5.0"Hg between the receipt vac. And the final vac. Bag. reported on the COC, indicating loss of vacuum. 2.8. Sample cannot be analyzed. Container was 2.16. Canister sample received at >15"Hg (not identified $\square$ received broken / $\square$ leaking / $\square$ flat / $\square$ defective. as a Trip/Field Blank). 2.9. Tedlar bag / canister received emitting a strong 2.17. Canister Trip Blank received at low vacuum (< odor; Sample $\square$ can / $\square$ cannot (check one) be 25"Ha). analyzed. 2.18. Sorbent Sample received outside method required

2.10. Tedlar Bag for Sulfur analysis has metal fitting.

2.11. Environmental Supply Company valves

temperature of 2°C to 6°C;  $\square$  ice /  $\boxtimes$  blue ice (check one) was present. A temp. Blank  $\square$  was /  $\boxtimes$  was not

Other (describe below)

present (check one).

2.19.

Initials:	Date:	Notify Receiving:	Notify PM:	
Describe the Discrepancy:	samples rec'd at 8C			

# 3. <u>Lab Discrepancies requiring Team Leader/PM notification</u>

Document in Analytical Notes of Lab Narrative

analyzed.  3.2.  Tedlar Bag found to cannot be analyzed.	an / ☐ cannot (check one) be	glassware.	instrument malfunction / broken
analyze prior to expirat	eived with insufficient time to ion. be leaking at the time of analysis.	QC/sample(s) for extra  3.8. ☐ Reporting Limit wa  3.9. ☐ Post weight > Pre v PM10/TSP samples.  3.10. ☐ Other (describe bel	s raised. veight in field/lab Blank for
Initials:	Date:	Notify Receiving:	Notify PM:
Team Lead Initials:			
Describe the Discrepance	y:		
How Does this Affect Clie	ent:		
	Project Mana	ager Use Only	
Project Manager Notification		Section 2 Complete	☐ Section 3
Complete	<del></del>	·	
Action: ☐ It is not necessary to no	tify the client. Narrate the discrepa	ancy in Receiving Notes/Analytica	Notes of Lab Narrative.
		ancy in Receiving Notes/Analytica	l Notes of Lab Narrative.
It is not necessary to no			l Notes of Lab Narrative.
It is not necessary to no	Date:		l Notes of Lab Narrative.
☐ It is not necessary to no PM Initials: ☐ Client notification requi	Date:		I Notes of Lab Narrative.
☐ It is not necessary to no PM Initials: ☐ Client notification requi	Date:ired. See attached client contactions on the contaction of the contaction	ct / email, or comments below:	I Notes of Lab Narrative.
☐ It is not necessary to no PM Initials: ☐ Client notification requi Client Notification: PM Initials:BL Per ☐ Waiting for Client Repl	Date:ired. See attached client contactions on the contaction of the contaction	ct / email, or comments below:	
☐ It is not necessary to no PM Initials:  ☐ Client notification requi Client Notification: PM Initials:BL Per ☐ Waiting for Client Repl  ☐ Comments:  ☐ Procee	Date: ired. See attached client contains son notified: <u>David Shore</u> by  ed and narrate temperature descriptions	ct / email, or comments below:  Date: 8/21/2009	e of collection.
☐ It is not necessary to no PM Initials: ☐ Client notification requi Client Notification: PM Initials:BL Per ☐ Waiting for Client Repl ☐ Comments: ☐ Procee	Date: ired. See attached client contactions on notified: David Shore  ly  ed and narrate temperature descriptions  Name:	ct / email, or comments below:  Date: 8/21/2009	
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# Other Records



## Method: ATL Application #59 H2S-Radiello 170

CAS Number	Compound	Rpt. Limit (ug)	
7783-06-4	Hydrogen Sulfide	1.2	

@Air Toxics Ltd.

		DATA REVIEW CHECKLIST Work Order #: 0908456 C
$\mathbf{A}_1$	$A_2 R T M$	Q
		<ul> <li>□ Analysis/Reporting vs. Project Profile/SOP requirements checked (i.e. 100% Dups, J-Flag to MDL, etc)</li> <li>□ The final report has the correct reporting list, special units, and header info.</li> </ul>
	-4.6%	<ul> <li>□ The final report has the correct reporting list, special units, and header info.</li> <li>□ Lab Narrative is correct (proper method &amp; description/Receiving &amp; Analytical notes correct)</li> </ul>
	- I I	
	0 0 0,40	□ Corrective Action issued - #
		LUMEN validation report present and initialed CIRCLE (YES / NO)
	0000	☐ Lab Blank, CCV, LCS and DUP met QC criteria
	0000	☐ Hold time is met for all samples
	岬 口角虾	☐ Appropriate data qualifier flags are applied
	ф D   pr	☐ Manual integrations for samples and QC are properly documented
		Samples analyzed within the project or method specific clock
		Retention times have been verified
		☐ Appropriate ICAL(s) included ☐ At least one result per sample is verified against the target quant sheets/raw data
		At least one result per sample is verified against the target quant sheets/raw data
		Dilution factor correctly calculated (sample load volume, syringe and bag dilutions, can
		pressurization(s)) Correct amount of sample analyzed (i.e. sample not over-diluted)
	_ v <b>ag</b> □	Spectra verified - documentation of spectral defense included (Section 5A of eCVP pkg)
***************************************		TICs resemble reference spectra
	<b>√</b> □	TICs between duplicate samples are consistent
	0000	
		Data for multiple analyses of sample(s) has been evaluated for comparability of results
		Special units for all samples in the final report are correctly calculated
		Manually entered results checked (i.e. TPH/NMOC)
		Chain of Custody verified for any special comments (i.e. different compounds/RLs, action levels)  Chain of Custody scanned correctly
	u	□ Verify sample id's vs. chain of custody
	M	Date MDL(s) performed per instrument(s)
	Оф	Samples pressurized w/ appropriate gas (N <sub>2</sub> or He)
	□ф	Final pressure consistent with canister size (6L vs. 1L)
	_ b	Verify receipt pressures
	o do	Verify canister ID #'s
en managemen	Z G	
	A - A - A - A - A - A - A - A - A - A -	MDL date(s) present for all instruments utilized
	ndr 🗆 🛊	□ Client LUMEN report reviewed for accuracy and completeness
Notes:	(to include: not	ing samples with QA/QC problems, Blanks with positive hits, narratives, etc.)
A/R:	DA 10 111A	ον Δ
	Dup. 41A,	70 V
	7741117711771177117711771177	
M/Q:	************	
	W. W.	
	A <sub>1</sub> /A <sub>2</sub> Analytical Review	R/T M Q  /Date) (Reporting Review/Date) (Management Review/Date) (QA Review/Date)
$A_1$ :		R: $69 / 16/05$ (Namagement Review/Date)
		- 7 Hill
A <sub>2</sub> :		

Note (1): Please check all the appropriate boxes. Indicate "NA" for any statement that does not apply. Note (2): Management reviewer and reporting reviewer must be separate individuals. Rev. 02/20/09